



Course Information

Course Title	CCNA 2: Routing and Switching Essentials
Course Prefix, Num. and Title	ITCC 1440 - CCNA 2: Routing and Switching Essentials
Division	Technology & Business
Department	Computer Science
Course Type	WECM Course
Course Catalog Description	Describes the architecture, components, and basic operation of routers and explains the basic principles of routing and routing protocols. It also provides an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks.
Pre-Requisites	C or better in ITCC 1414 or ITCC 1475
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	4:3:3
Lab/Other Hours	
Equated Pay Hours	4.5
Lab/Other Hours Breakdown: Lab Hours	3
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

Introduction to Switched Networks
Basic Switching Concepts and Configuration
Implementing VLAN Security
Routing Concepts
Inter-VLAN Routing
Static Routing
Routing Dynamically
Single-Area OSPF
Access Control Lists
DHCP
Network Address Translation for IPv4

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

1. Configure and maintain routers and switches
2. Resolve common issues with routing protocols, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.

Methods of Assessment:

All outcomes will be assessed by one or more of the following:

Individual Projects
Tests and Quizzes
Lab Assignments
Final Exam
Skills Exam

Required text(s), optional text(s) and/or materials to be supplied by the student:

- CCNA Portable Command Guide Third Edition by Empson ISBN-9781587204302 Book:9780133381368
- USB Flash Drive
- High-speed Internet Connection

Suggested Course Maximum:

16

List any specific or physical requirements beyond a typical classroom required to teach the course.

Computer for each student, Cisco routers, switches, wireless routers, fiber cable tester, Ethernet cable testers.

The course maximum is due to the amount of equipment contained in the class.

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

Course Requirements:
Comprehensive Skills Exam: 20-25%

Comprehensive Final Exam: 20-25%

Labs / Homework: 25-30%

Chapter Tests: 20-25%

Attendance / Participation: 0-15%

Grading System:

100 -90 = A

89 - 80 = B

79 - 70 = C

69 - 60 = D

and below = F

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms
 - Critical Thinking
 - Communication
 - Empirical & Quantitative Skills
 - Teamwork
 - Social Responsibility
 - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist